

2011 Military Health System Conference

A Provider's Perspective

Utilizing Deployed Information Technology to Care for Our Wounded Warriors

The Quadruple Aim: Working Together, Achieving Success

Michael J. Meier, CDR, MC, USN

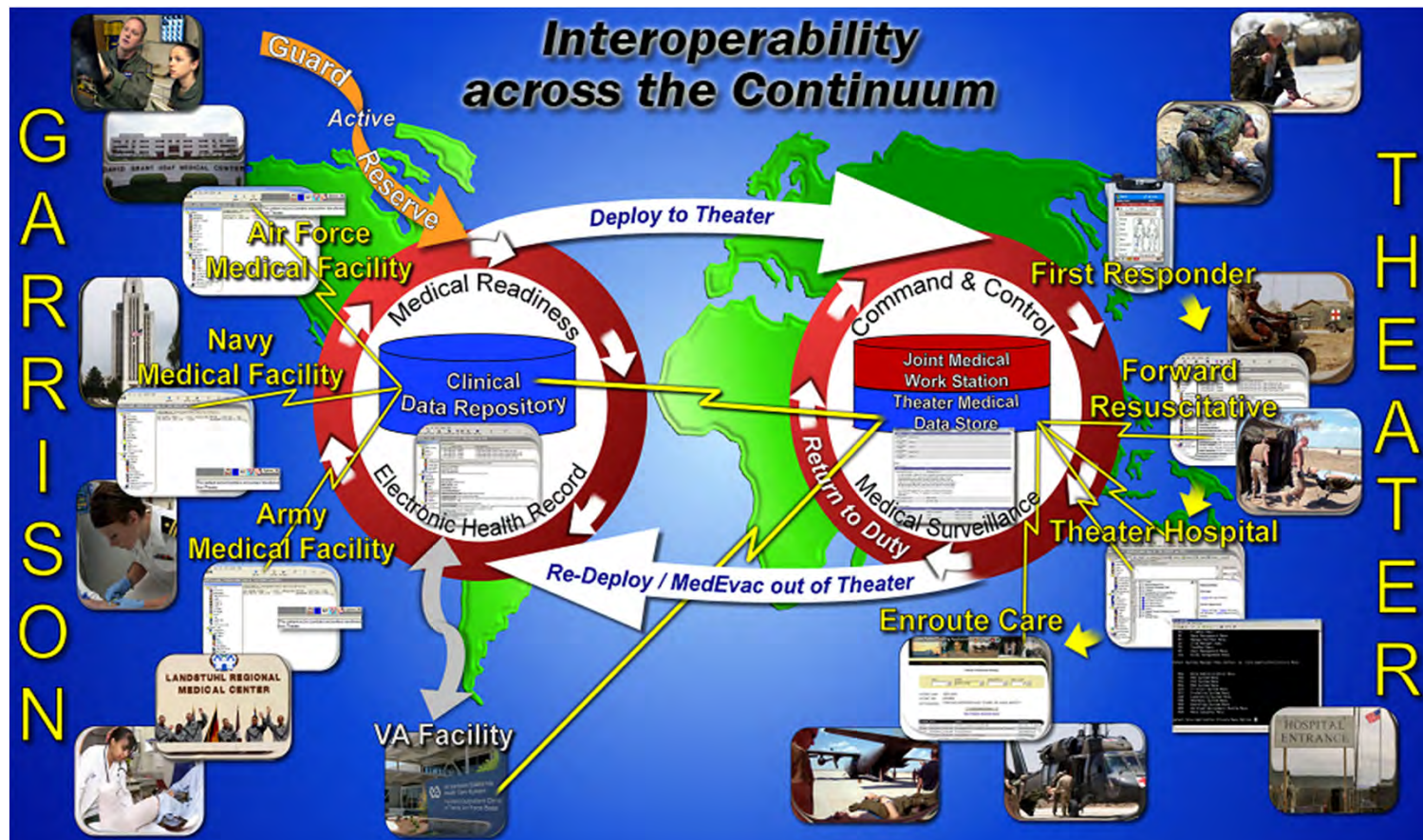
24 January 2011



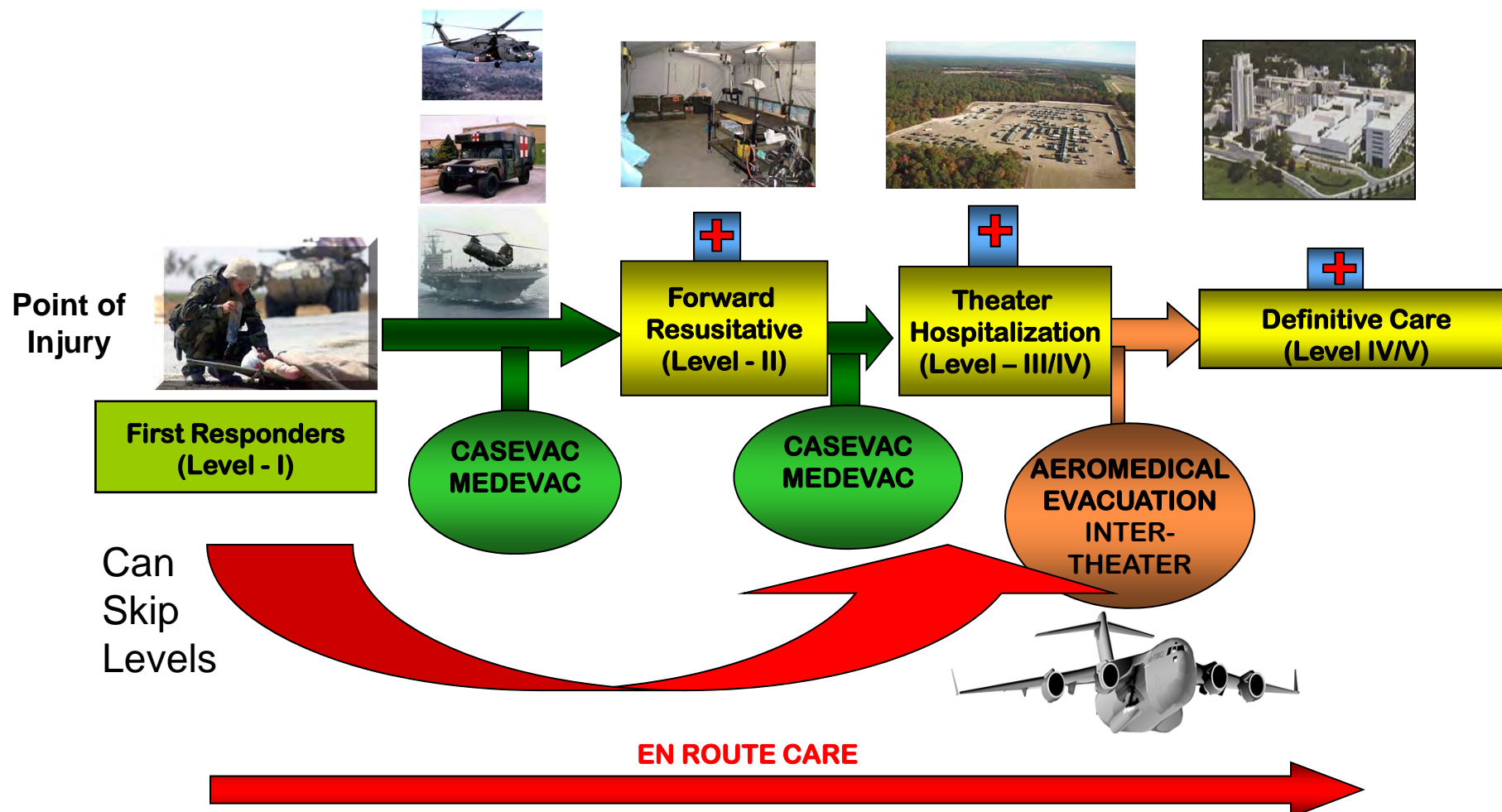
The Joint Staff, J4/HSSD

Report Documentation Page				Form Approved OMB No. 0704-0188	
Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.					
1. REPORT DATE 24 JAN 2011		2. REPORT TYPE		3. DATES COVERED 00-00-2011 to 00-00-2011	
4. TITLE AND SUBTITLE A Provider's Perspective: Utilizing Deployed Information Technology to Care for Our Wounded Warriors				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) The Joint Staff, J4/HSSD, Washington, DC, 20318				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution unlimited					
13. SUPPLEMENTARY NOTES presented at the 2011 Military Health System Conference, January 24-27, National Harbor, Maryland					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT Same as Report (SAR)	18. NUMBER OF PAGES 18	19a. NAME OF RESPONSIBLE PERSON
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified			

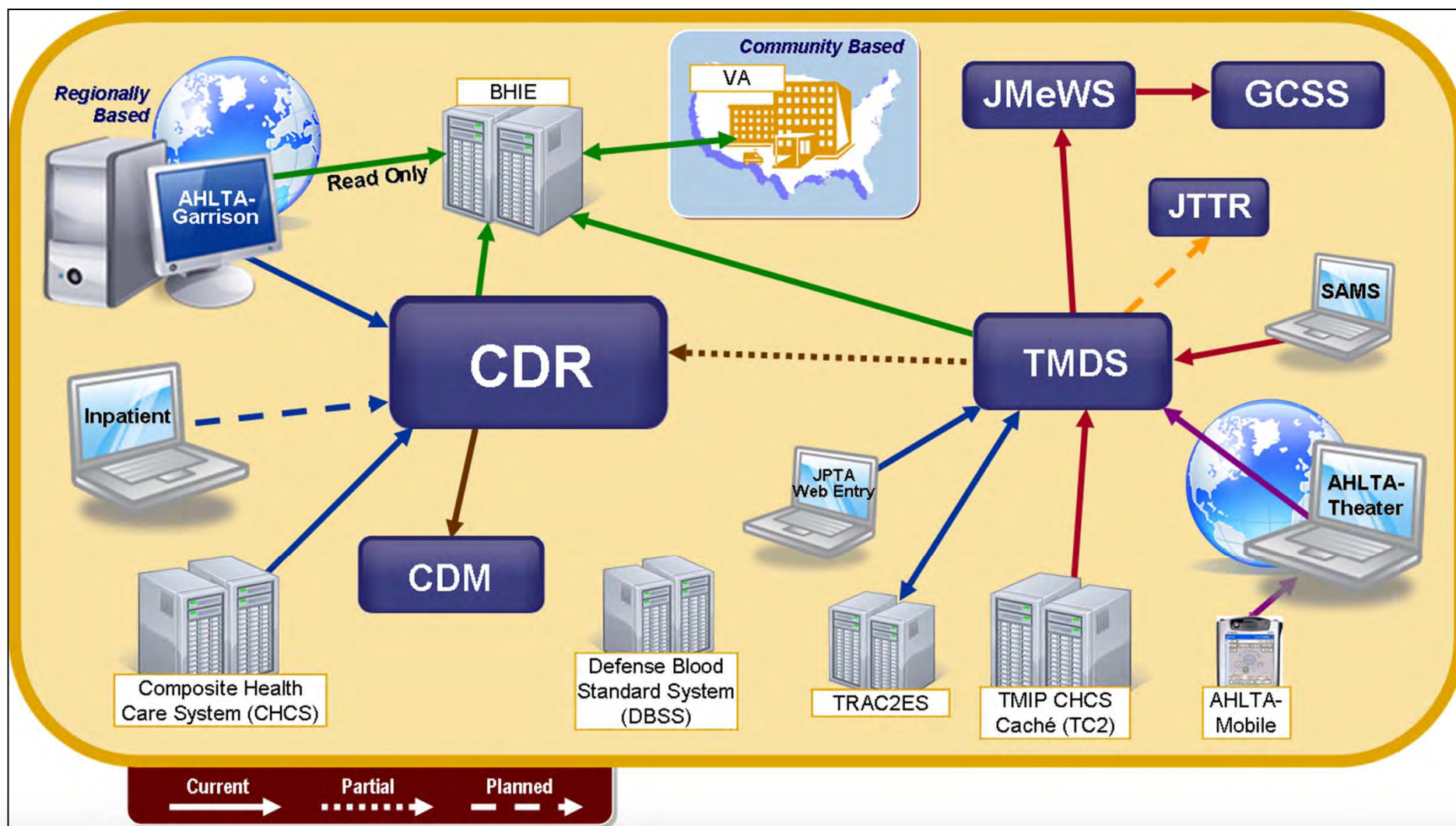
Continuum of Care



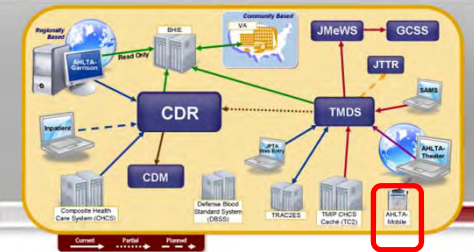
Treatment/Patient Movement Flow



EHR Data Flow to Support the Continuum of Care



AHLTA-Mobile...*technology* for first responders



Expanded tools for first responders, including documentation, data access, reference libraries and medical resources



■ Key Features

- Point of injury clinical documentation (now including traumatic brain injury)
- Health history information, including allergies and medical readiness data
- Medical references (pharmacy library, Thomson Clinical Reference)
- Data feed to AHLTA-Theater

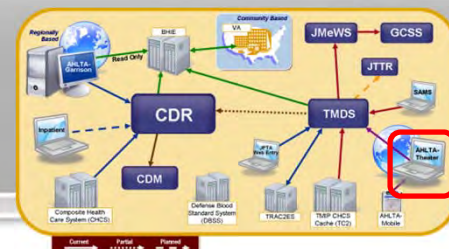
■ Key Benefits

- Helps ensure accuracy of information with automated medical coding
- Enables providers to access information at any location supporting the highest level of care
- Improves visibility of documented Level 1 care

■ Key Issues

- Training
- Battery Life
- Durability

AHLTA-Theater (Block 2, Release 1) ...outpatient documentation solution



Extends the sustaining-base electronic medical record (AHLTA) capability, look and feel to the Theater of Operations

■ Key Features

- Low and no communication environment (store and forward)
- Interfaces with SAMS, TC2 and AHLTA-Mobile
- Bed and Order Management
- Theater Admin/Theater Security (create clinics, manage users)
- Able to import patient demographic data from Authoritative Data Source
- Drug-Drug/Drug-Allergy interaction screening
- Alternate input method

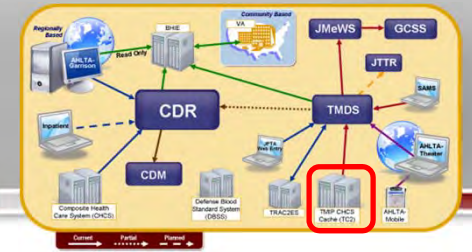
■ Key Benefits

- Improve system availability, reliability and sustainability
- Enhance the delivery of patient care
- Enhance the ability to provide complete and accurate of documentation of patient care at every echelon of care

■ Key Issues

- Training
- Connectivity
- Duplicate Patients
- First Responder Documentation

TMIP Composite Health Care System (CHCS) Cache (TC2)...*inpatient documentation* *solution*



Provides documentation for Theater inpatient healthcare and ancillary services order-entry and result-reporting in the deployed environment



2011 MHS Conference

■ Key Features

- Provides laboratory, radiology and pharmacy ordering and results retrieval capabilities; enables users to schedule outpatient clinic/radiology procedures
- Uses the TMIP Framework for transmission of data to TMDS
- Clinical Notes for different procedures including admission, discharge and patient progress, transportable Clinical Patient Records
- TC2 has processed 48,129 total records from June 2007 to present

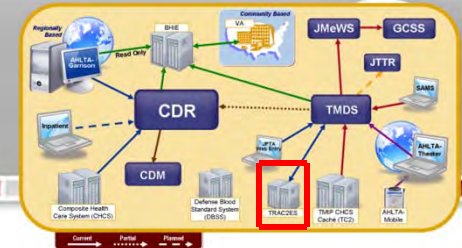
■ Key Benefits

- Enhanced Inpatient/Ancillary Continuity of Care
- Enables the Deployed Theater to achieve a paperless Inpatient Record
- Increased clinical and administration efficiency by providing clinical documentation capabilities

■ Key Issues

- Training
- Business Processes

TRANSCOM Regulating and Command & Control System (TRAC²ES)...global patient movement solution



Enables joint global patient movement, planning, tracking and Command and Control (C²) within (intra) and between (inter) theaters



■ Key Features

- Links originating and destination MTFs with medical evacuation transportation assets and the C² infrastructure
- Provides the ability to plan and manage end to end patient movement
- Supports strategic and tactical operations in peacetime and contingency environments

■ Key Benefits

- Maintains continuous global visibility and awareness of patients and the patient movement system
- In transit visibility (ITV)
- Combines transportation, logistics and clinical decision elements into seamless patient movement system

■ Key Issues

- Not an EHR
- Enroute Care Documentation

The diagram illustrates the JMEWS architecture, centered around the TMDS (Threat Management and Decision Support) system, which is highlighted with a red box. The architecture is organized into three main regions:

- Regionally Based:** Includes the AHLTA-Garrison system, which connects to the CDR (Command and Decision Support) system. The CDR system is also connected to the CDM (Command and Decision Management) system.
- Community Based:** Includes the JMEWS system, which connects to the CCSS (Command and Control Support System) and the JTTR (Joint Threat Tracking and Reporting) system. The JTTR system is also connected to the SAMIS (Sensor and Mission Information System) system.
- Other Systems:** Includes the AHLTA-Transfer system, which connects to the TMDS system. The TMDS system is also connected to the TRAC2ES (Threat Radar and Control) system, the TSPR CHCS (Threat Sensor and Processing) system, and the TSPR CHCS (Threat Sensor and Processing) system.

The TMDS system is the central hub, receiving data from various sources and providing decision support to the CDR and JTTR systems. The CDR system is the primary command and decision support system, while the JTTR system is the primary threat tracking and reporting system. The TMDS system is also connected to the CDM system, which provides command and decision management support.

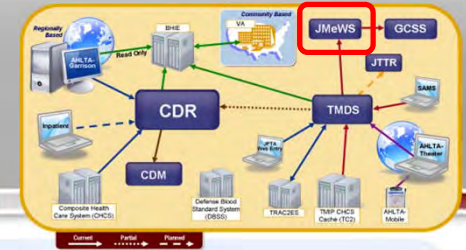
■ Key Features

- ### ■ Key Benefits

- ## ■ Key Issues

- 9

Joint Medical Workstation (JMeWS)...web-based medical command and control



Continued support for medical command and control (C2) requirements with JMeWS



2011 MHS Conference

■ Key Features

- Web-based application that provides medical information and unit status and readiness to medical leadership from the unit level to the Joint Task Force, Combatant Commanders and to Service/DOD Components.
- Ad hoc reports based on patient data
- Medical unit readiness reporting and aggregation capability (Annex Q reporting)

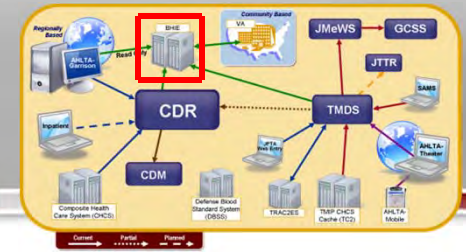
■ Key Benefits

- Common operational picture that combines medical facility readiness and status information displaying on a map
- Symptom-based disease detection Customizable disease surveillance
- Diagnosis-based disease detection and Disease Non Battle Injuries (DNBI) with Automated DNBI reporting
- Enhances situational awareness and decision making for Joint Planners and Command Control Staff
- Displays data that is required by planners and operational staff at respective levels

■ Key Issues

- Training
- SIPR Availability
- Awareness
- Data Quality

Bidirectional Health Information Exchange (BHIE)...secure real time display of viewable health data between DOD/VA



Allows DOD and VA providers to view clinical information in real time for patients who receive care in either agency health system

- SHARE Web Portal (stand alone web application)
- AHLTA-BHIE Data Viewer (viewer within AHLTA)

■ Key Features

- ▣ Encounters/clinical notes
- ▣ Problem lists/procedures/diagnoses
- ▣ Vital signs
- ▣ Outpatient medications, laboratory results, radiology reports and allergies
- ▣ Theater level clinical data from TMDS
- ▣ Inpatient documentation from Essentris®
- ▣ Family histories/social histories/other histories
- ▣ Questionnaires

■ Key Benefits

- ▣ Enhance the provision of care to Wounded Warriors
- ▣ Reduce the need to exchange paper records with the VA
- ▣ Enhance the delivery of patient care
- ▣ Enhance readiness
- ▣ Increase clinical and administrative efficiency

■ Key Issues

- ▣ Training
- ▣ Awareness

Medical Situational Awareness in Theater (MSAT)



- Geospatial Information System incorporating a 3-D viewer
- Global medical information and medical reference
- Health threat alerts
- CBRN alerts
- Disease surveillance data
- Current and forecasted weather

Medical Situational Awareness in Theater (MSAT) (Cont'd)



- Personnel Location
- Medical Unit Location
- Single Sign-On interface with Global Combat Support System – Joint (GCSS-J)
- Publishing and consuming of web services via Net-Centric Enterprise Services (NCES)

Deployed October: 139 Unique Visitors in November

MSAT Portal



Medical Situational Awareness in the Theater

MSAT Demonstration

LIMITED DISTRIBUTION

Distribution authorized to DoD, IAW 10 U.S.C. §§ 130 & 455. Release authorized to U.S. DoD contractors, IAW 48 C.F.R. § 252.245-7000. Refer other requests to: Headquarters, NGA, ATTN: Release Officer, Mail Stop D-120, 4600 Sangamore Rd., Bethesda, MD 20816-5003. Destroy IAW DoDD 5030.59. Removal of this caveat is prohibited.

Questions/Additional Information:



Michael.meier@js.pentagon.mil

Arthur.Anthony@tma.osd.mil

<http://fhp.osd.mil/>

http://www.health.mil/MHSCIO/programs_products/jmis.aspx

Backup Slides



Backup

Supporting Beneficiary Care Defense Medical Logistics Standard Support (DMLSS)



DMLSS enabled \$4.3B in pharmacy and medical surgical purchases for MHS facilities throughout the DoD and the combat Theater



■ Key Features

- Implements just-in-time logistics, eliminating the need to maintain large pharmaceutical and medical/surgical inventories at the wholesale level
- Allows users to select and order the best value item required
- Located at every DoD health care facility worldwide

■ Key Benefits

- Standardizes medical logistics management among the services
- Reduces the time spent on logistics planning and management
- Improves the effectiveness, efficiency and quality of health care delivery

“The receipt of goods, once ordered, is FAST! I’m very satisfied with that.”

Anonymous DMLSS User, 2009 TMA Customer Satisfaction Survey

Supporting Beneficiary Care Patient Movement Items Tracking System (PMITS)



In FY09, PMITS supported over 2,000 aeromedical evacuations. No mission was cancelled or delayed due to a lack of PMI equipment



■ Key Features

- Tracks the Patient Movement Item (PMI) equipment used during aeromedical evacuation missions
- Provides hand-held scanners and bar code technology to capture the movement of the PMI inventory

■ Key Benefits

- Timely and accurate identification of PMI equipment at each site
- Supports less investment in inventory while improving equipment availability

“Never encountered a system failure”

Anonymous PMITS User, 2009 TMA Customer Satisfaction Survey